Claims

1. A method for communicating between a base transceiver station and a mobile unit comprising the steps of:

transmitting a downlink signal burst from the base transceiver station to the mobile unit, the downlink signal burst containing a selected number of bits having a first time length; and

transmitting an uplink signal burst from the mobile unit to the base transceiver station, the uplink signal burst containing the selected number of bits having a second time length, and

wherein the first time length is shorter than the second time length thereby providing a guard time.

2. The method as recited in claim 1 wherein the guard time is sufficient for the mobile unit to switch from transmit to receive mode.

3. The method as recited in claim 1 comprising the steps of:

forming the downlink signal burst using a first modulation technique; and

forming the uplink signal burst using a second modulation technique.

4. The method as recited in claim 3 wherein the first modulation technique has a higher-order than the second modulation technique.

5. The method as recited in claim 4 wherein the first modulation technique is quadrature amplitude modulation.

6. The method as recited in claim 5 wherein the quadrature amplitude modulation is sixteen quadrature amplitude modulation.

7. The method as recited in claim 6 wherein the second modulation technique is phase shift keying.

8. The method as recited in claim 7 wherein the phase shift keying is quaternary phase shift keying.

9. The method as recited in claim 5 wherein the second modulation technique is quadrature amplitude modulation.

10. The method as recited in claim 9 wherein the second modulation technique is four quadrature amplitude modulation.

11. The method as recited in claim 1 wherein the second time length is approximately 22.5 milliseconds long.

12. The method as recited in claim 11 wherein a total of the guard time is approximately 8.125 milliseconds.

13. A system for wireless communication comprising:

a base transceiver station for transmitting a downlink signal burst containing a selected number of bits having a first time length; and

a mobile unit for transmitting an uplink signal burst containing the selected number of bits having a second time length, from the mobile unit to the base transceiver station, and

wherein the first time length is shorter than the second time length thereby providing a guard time.

14. The system as recited in claim 13 wherein the guard time is sufficient for the mobile unit to switch from transmit to receive mode.

15. The system as recited in claim 13 wherein the base transceiver station comprises a first modulation circuit for modulating the downlink signal burst using a first modulation technique.

16. The system as recited in claim 15 wherein the mobile unit comprises a second modulation circuit for modulating the uplink signal burst using a second modulation technique.

17. The system as recited in claim 16 wherein the first modulation technique is a higher-order modulation than the second modulation technique.

18. The system as recited in claim 17 wherein the first modulation circuit comprises a quadrature amplitude modulator.

19. The system as recited in claim 17 wherein the second modulation circuit comprises a phase shift keying modulator.

20. The system as recited in claim 17 wherein the first time length is approximately four milliseconds more than the second time length.